Digital Video Recorders Quick Guide

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	Bosch Digital Video Recorders		DVR1A	DVR1C	DVR4C	Divar	Divar MR	Divar XF	DiBos Micro	DiBos Rackmount
System	Operating System		Embedded	Embedded	Embedded	Embedded	Embedded	Embedded	Windows XP Embedded	Windows XP Embedded
	Rack Mountable		No	No	No	Yes	Yes	Yes	Yes	Yes
	SDK Available		No	No	No	Yes	No	Yes	Yes	Yes
	Warranty		3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years
Video	Input	Channels	1	1	4	6, 9, 16	8, 16	Analog: 8, 16 IP: 8 (H.264)	Analog: 6, 12 IP: 8 (MPEG-4)	Analog: 6, 12, 18, 24, 30 IP: 16, 32 (MPEG-4)
	Output	Looping Video	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Composite Outs	1	1	1	2	2	2	2	2
		VGA	No	No	No	No	1	2	1	1 (plus optional 2nd)
		Spot Monitor	No	No	No	Yes	1	1	2	2
Audio	Input	Channels	0	2	4	n/a	4, 8	8, 16	2, 4 (plus 8 from IP cameras)	2, 4, 6, 8, 10 (plus up to 32 from IP cameras)
	Output	Channels	0	2	4	n/a	1	2	1	1
	Compression Type		n/a	ADPCM	ADPCM	n/a	ADPCM2	MPEG-2 Layer II	G.726	G.726
	Sample Rate		n/a	8 KHz	8 KHz	n/a	8 KHz	48 KHz	32 KHz	32 KHz
	Synchronous Audio		n/a	Yes	No	n/a	Yes	Yes	No	No
	Associate Multiple Cameras to 1 Audio		n/a	n/a	No	n/a	Yes	No	Yes	Yes
Alarms	Inputs		1	1	4	6, 9 or 16 (one per video channel)	8, 16	8, 16	12	32
	Relay Outputs		1	1	4	4	4, 8	5	12	16
	Call Up Pre-position on Dome Cameras		n/a	n/a	n/a	Yes	Yes	Yes	Yes	Yes
	Increase Frame Rate on Alarm		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Simultaneous normal and event recording		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Multiple Camera Linking on Alarm Event		n/a	n/a	Yes	No	No	No	Yes	Yes
	Notification via e-mail		No	No	Yes	No	Yes	No	Yes	Yes
	Notification to Remote PC		No	No	Yes	Yes	Yes	Yes	Yes	Yes
	Pre-alarm		Up to 220 Seconds	Up to 220 Seconds	Up to 30 Seconds	30 Seconds	Up to 60 Seconds	Up to 120 Seconds	Yes	Yes
	Alarm Time		Unlimited	Unlimited	Up to 120 Seconds	Up to 60 Seconds	Up to 10 Minutes	Up to 120 Seconds	Yes	Yes
	Motion Detection		No	No	Yes	Yes	Yes	Yes	Yes	Yes
Recording	Compression	Video	M-JPEG	M-JPEG	MPEG-4	Wavelet	MPEG-4	H.264	MPEG-4, JPEG	MPEG-4, JPEG
		Software or Hardware	Hardware	Hardware	Hardware	Hardware	Hardware	Hardware	Video Hardware, Audio Software	
	Frame Rate (IPS)	PAL	50 IPS @ CIF	50 IPS @ CIF	100 IPS @ CIF	50 IPS @ 2CIF	400 IPS @ CIF	400 IPS @ 4CIF	75/150 @ CIF	75/150/225/300/375 @ CIF
		NTSC	60 IPS @ CIF	60 IPS @ CIF	120 IPS @ CIF	60 IPS @ 2CIF	480 IPS @ CIF	480 IPS @ 4CIF	90/180 @ CIF	90/180/270/360/450 @ CIF
	IPS per Camera	PAL	25 IPS @ CIF (Normal) 50 IPS @ CIF (Alarm)	25 IPS @ CIF (Normal) 50 IPS @ CIF (Alarm)	25 IPS @ CIF	6 Ch.: 8.3 IPS @ 2CIF 9 Ch.: 5.0 IPS @ 2CIF 16 Ch.: 3.1 IPS @ 2CIF	25 IPS @ CIF	25 IPS @ 4CIF	25 Per Camera Max 150 on a 12 Channel Unit @ CIF	25 Per Camera Max 375 on a 30 Channel Unit @ CIF
		NTSC	30 IPS @ CIF (Normal) 60 IPS @ CIF (Alarm)	30 IPS @ CIF (Normal) 60 IPS @ CIF (Alarm)	30 IPS @ CIF	6 Ch.: 10 IPS @ 2CIF 9 Ch.: 6.5 IPS @ 2CIF 16 Ch.: 3.75 IPS @ 2CIF	30 IPS @ CIF	30 IPS @ 4CIF	30 Per Camera Max 180 on a 12 Channel Unit @ CIF	30 Per Camera Max 450 on a 30 Channel Unit @ CIF
	Recorded Video Resolution	PAL	352 x 288	352 x 288	352 x 288	720 x 288	352 x 288/704 x 288/704 x 576	352 x 288/704 x 288/704 x 576	CIF/2CIF/4CIF Analog and IP Cameras	
		NTSC	352 x 240	352 x 240	352 x 240	720 x 240	352 x 240/704 x 240/704 x 480	352 x 240/704 x 240/704 x 480	CIF/2CIF/4CIF Analog and IP Cameras	
	Individual Camera Adjustment (IPS, Quality)		n/a	n/a	No	Yes	Yes	Yes	Yes	Yes
	Schedule Recording Modes		Daily/Weekday/Weekend/Specific Day		Day/Night/Weekend	Day/Night/Weekend/Specific Day	Day/Week/Specific Day	Weekday/Weeknight/Weekend Day/Weekend Night/32 Exception Days	Day/Night/Weekend/Holiday/Specific Day	
	HDD Overwrite Warning		No	No	Yes	No	Yes	No	Yes	Yes
	Recording Times	Best Quality/Highest Resolution, 3 IPS Continuous, 50% Motion, Very Busy Scene (Outdoor), No Audio	6 Days (80 GB) @ CIF	12 Days (160 GB) @ CIF	7 Days (80 GB) @ CIF 13 Days (160 GB) @ CIF 26 Days (320 GB) @ CIF 50 Days (600 GB) @ CIF	6 Ch.: 5 Days (320 GB) @ 2CIF 9 Ch.: 4 Days (320 GB) @ 2CIF 9 Ch.: 7 Days (600 GB) @ 2CIF 16 Ch.: 4 Days (600 GB) @ 2CIF 16 Ch.: 6 Days (1000 GB) @ 2CIF	8 Ch.: 9 Days (500 GB) @ 4CIF 8 Ch.: 18 Days (1000 GB) @ 4CIF 16 Ch.: 9 Days (1000 GB) @ 4CIF 16 Ch.: 18 Days (2000 GB) @ 4CIF	8 Ch.: 12 Days (500 GB) @ 4CIF 8 Ch.: 36 Days (1500 GB) @ 4CIF 16 Ch.: 6 Days (500 GB) @ 4CIF 16 Ch.: 18 Days (1500 GB) @ 4CIF 16 Ch.: 48 Days (3000 GB) @ 4CIF	6 Ch.: 10 Days (400 GB) @ 4CIF 12 Ch.: 5 Days (400 GB) @ 4CIF	6 Ch.: 19 Days (750 GB) @ 4CIF 12 Ch.: 10 Days (750 GB) @ 4CIF 18 Ch.: 9 Days (1000 GB) @ 4CIF 24 Ch.: 13 Days (1600 GB) @ 4CIF 30 Ch.: 10 Days (1600 GB) @ 4CIF
		Normal Quality/Standard Resolution, 3 IPS Continuous, 50% Motion, Very Busy Scene (Outdoor), No Audio	8 Days (160 GB) @ CIF	16 Days (160 GB) @ CIF	20 Days (80 GB) @ CIF 39 Days (160 GB) @ CIF 78 Days (320 GB) @ CIF 146 Days (600 GB) @ CIF	6 Ch.: 14 Days (320 GB) @ 2CIF 9 Ch.: 9 Days (320 GB) @ 2CIF 9 Ch.: 17 Days (600 GB) @ 2CIF 16 Ch.: 10 Days (600 GB) @ 2CIF 16 Ch.: 16 Days (1000 GB) @ 2CIF	8 Ch.: 36 Days (500 GB) @ CIF 8 Ch.: 72 Days (1000 GB) @ CIF 16 Ch.: 36 Days (1000 GB) @ CIF 16 Ch.: 72 Days (2000 GB) @ CIF	8 Ch.: 120 Days (500 GB) @ CIF 8 Ch.: 363 Days (1500 GB) @ CIF 16 Ch.: 60 Days (500 GB) @ CIF 16 Ch.: 181 Days (1500 GB) @ CIF 16 Ch.: 484 Days (3000 GB) @ CIF	6 Ch.: 45 Days (400 GB) @ CIF 12 Ch.: 22 Days (400 GB) @ CIF	6 Ch.: 86 Days (750 GB) @ CIF 12 Ch.: 43 Days (750 GB) @ CIF 18 Ch.: 38 Days (1000 GB) @ CIF 24 Ch.: 58 Days (1600 GB) @ CIF 30 Ch.: 46 Days (1600 GB) @ CIF

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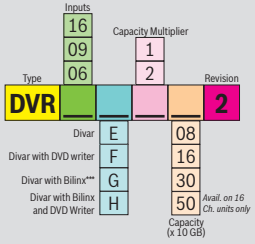
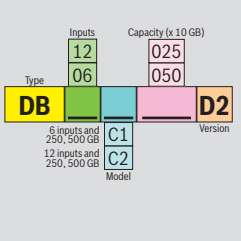
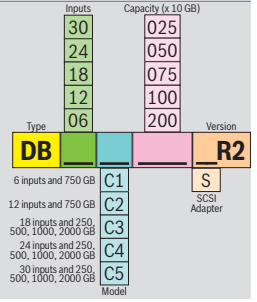
			Bosch Digital Video Recorders	DVR1A	DVR1C	DVR4C	Divar	Divar MR	Divar XF	DiBos Micro	DiBos Rackmount
Storage			Internal HDD	80 GB	160 GB	80 - 160 - 320 - 600 GB	80 - 160 - 320 - 600 - 1000 GB	160 - 320 - 500 - 1000 - 2000 GB	250 - 500 - 1500 - 3000 - 4000 GB	250 - 500 GB	250 - 500 - 750 - 1000 - 2000 GB
	Export		Supported Devices	Compact Flash	Compact Flash	USB 1.1	Internal CD/DVD Writer Remote Client	Internal CD/DVD Writer, USB 2.0	Internal CD/DVD Writer, USB 2.0	CD-RW, DVD, USB 2.0, Network Drive, SCSI	CD-RW, DVD, USB 2.0, Network Drive, SCSI
			Data Format	JPEG	JPEG	Native, AVI, or JPEG	Native File Format	Native File Format	Native File Format	Bosch, ASF	Bosch, ASF
			Back-up Mode	Manual	Manual	Manual	Manual	Manual or Automatic	Manual	Manual or Automatic	Manual or Automatic
	On-board RAID			No	No	No	No	No	Yes	No	No
	Support SCSI Disk Array			No	No	No	Yes, DVSA (Lite and Premium)	No	No	Yes, DVSA (Lite and Premium)	Yes, DVSA (Lite and Premium)
	Max. SCSI Array Configuration			n/a	n/a	n/a	12 TB*	n/a	n/a	13.8 TB**	13.8 TB**
Search	Timeline Search Bar (Color Coded)			No	No	Yes on Remote Software	Yes on Remote Software	Yes	No	Yes	Yes
	Search Mode			Date/time, Events, or Recordings List		Date/time, Events, Motion, Text	Date/time, Camera Number, Events, Motion, Smart Motion Search	Date/time, Camera Number, Events, Motion, Bookmark, Smart Motion Search	Date/time, Camera Number, Events, Motion	Date/time, Camera Name, Events, Pre-Alarm, Motion, Smart Motion Search	
	Smart Motion Search – Motion in specific area			No	No	No	Yes	Yes	No	Yes	Yes
Display	Live Resolution	PAL		720 x 576	720 x 576	720 x 576	720 x 576	720 x 576	720 x 576	CIF/2CIF/4CIF Analog and IP Cameras	
		NTSC		720 x 484	720 x 484	720 x 484	720 x 484	720 x 484	720 x 484	CIF/2CIF/4CIF Analog and IP Cameras	
	Screen Division (Multi-screen)			Full, 2x2, 3x3 (w/ Quad or Mux attached)		Full, 2x2, Sequence	Full, 2x2, 3x3, 4x4	Full, Sequence, 2x2, 3x3, 4x4, 5+1, 7+1	Full, Sequence, 2x2, 3x3, 4x4	Full, 2x2, 3x3, 4x4, 5x6	Full, 2x2, 3x3, 4x4, 5x6
	Digital Zoom			No	No	No	Yes	No	Yes	Yes	Yes
	Camera Lock-outs by User			No	No	No	Yes	Yes	No	Yes	Yes
Security/User Management	User Control		User Levels	1	3	2	6	3	4	Unlimited	Unlimited
			Add/Delete	No	No	No	Yes	Yes	Yes	Yes	Yes
			Set Viewing Permissions	No	No	Yes	Yes	Yes	Yes	Yes	Yes
			Centralized User Management	n/a	No	No	No	No	No	Yes - LDAP	Yes - LDAP
			Event Logging by User	No	No	No	No	No	No	Yes	Yes
	Data Integrity Check (Watermarking, etc.)			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Remote Access	Network	Connection		10BaseT Ethernet	10BaseT Ethernet	10/100 Ethernet	10/100 Ethernet	10/100 Ethernet	10/100 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet
		Protocol		TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP, UDP Tunneling	TCP/IP, UDP Tunneling
	Web Browser Access			No	Yes	No	Yes	Yes	No	Yes	Yes
	Simultaneous Accessible Users			n/a	4	5	6	5	5	20 with software; 5 with web browser	
	Remote PC Client	Resolution		n/a	n/a	720 x 576 (PAL) 720 x 484 (NTSC)	720 x 576 (PAL) 720 x 484 (NTSC)	352 x 288 (PAL) 352 x 240 (NTSC)	704 x 576 (PAL) 704 x 480 (NTSC)	CIF/2CIF/4CIF Analog and IP Cameras	
		Full Admin Control		n/a	n/a	Yes	Yes	Yes	Yes	Yes, Remote Desktop	Yes, Remote Desktop
		PTZ Control		n/a	n/a	n/a	Yes	Yes	Yes	Yes	Yes
		Export Options		n/a	n/a	Native, AVI, or JPEG	Native File Format (all cameras), .AVI (single camera)	Native File Format and .AVI (individual and multiple cameras)	Native File Format (individual and multiple cameras)	Bosch (All Cameras) ASF (Individual and Multiple Camers)	
Other Features	Instant Playback			No	No	No	Yes	Yes	Yes	Yes	Yes
	Bilinx/Up-the-Coax Camera Control			No	No	No	Yes	No	No	Yes	Yes
	Digital Zoom on Playback			No	No	No	Yes	No	Yes	Yes	Yes
	PTZ Joystick Control			No	No	No	Yes	Yes	Yes	Yes - DiBos/Bosch VMS	Yes - DiBos/Bosch VMS
	ATM/POS Interface			No	No	No	Yes	No	No	No	No
	OPC Support			No	No	No	Yes	No	No	Yes	Yes
Ordering Information	Part Numbers/Ordering Charts			DVR1A1081	DVR1C1161	DVR4C1081 (80 GB) DVR4C1161 (160 GB) DVR4C2161 (320 GB) DVR4C2301 (600 GB)		DVR-8K-016A (160 GB) DVR-16K-032A (320 GB) DVR-8L-016A (160 GB/DVD) DVR-8L-032A (320 GB/DVD) DVR-8L-050A (500 GB/DVD) DVR-8L-100A (1000 GB/DVD) DVR-16L-032A (320 GB/DVD) DVR-16L-050A (500 GB/DVD) DVR-16L-100A (1000 GB/DVD) DVR-16L-200A (2000 GB/DVD)	DHR-0800A-025A (250 GB) DHR-0800A-050A (500 GB) DHR-0800A-150A (1500 GB) DHR-1600A-025A (250 GB) DHR-1600A-050A (500 GB) DHR-1600A-150A (1500 GB) DHR-1600A-300A (3000 GB) DHR-0800B-025A (250 GB/DVD) DHR-0800B-050A (500 GB/DVD) DHR-0800B-150A (1500 GB/DVD) DHR-0800B-300A (3000 GB/DVD) DHR-1600B-050A (500 GB/DVD) DHR-1600B-150A (1500 GB/DVD) DHR-1600B-300A (3000 GB/DVD) DHR-1600B-400A (4000 GB/DVD)		

* Due to SCSI specifications, the daisy chaining of more than two Digital Video Storage Array subsystems (DVA-08K/DVA-16K) on a single Divar is NOT RECOMMENDED. Divar can address up to 6 SCSI IDs (7 for units without DVD writer) and a maximum of 2TB per ID (12TB with DVD writer or 14TB for units without a DVD writer) Stated capacities assume JBOD configuration 8% overhead on the HDDs.
** Due to SCSI specifications, the daisy chaining of more than three Digital Video Storage Array subsystems (DVA-08K/DVA-16K) on a single DiBos is NOT RECOMMENDED. The maximum configuration is (2) DVA-16Ks or (1) DVA16K and (2) DVA08Ks daisy chained. Stated capacities assume JBOD configuration and 8% overhead on the HDDs.
*** The "G" option (Divar with Bilinx) is not available in North or South America.

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